

**AMENDMENTS TO THE DRAWINGS:**

The attached sheets of formal drawings are being filed concurrently herewith. These sheets, which include Figs. 1A, 1B, 2A, 2B, 3, 4, and 5, replace the original sheets of informal drawings including Figs. 1A, 1B, 2A, 2B, 3, 4, and 5. It is respectfully submitted that no substantive changes are being made to these figures as a result of the filing of these formal drawings.

Attachment: Replacement Sheets

**REMARKS/ARGUMENTS**

Claims 1-5, 7, and 9-21 are pending in the present application. Claims 1, 5, 7, 9, 14, 15, and 17-21 are amended. Claims 6 and 8 are canceled. Claims 1, 5, 14, and 18 are independent claims.

**Prior Art Rejections**

Claims 1-8, 10, 11, 14, and 18 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,465,251 to Judd et al. (hereafter Judd). This rejection, insofar as it pertains to the presently pending claims, is respectfully traversed.

Further, claims 9, 12, 15-17, and 19-21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Judd in view of the Examiner's taking of official notice.

Initially, Applicant points out that claims 6 and 8 have been canceled in the above claim amendments. Accordingly, the rejection of claims 6 and 8 has been rendered moot.

**Synopsis of Judd**

Judd deals with an addressing scheme for a network incorporating both dual-port nodes and switch nodes having three or more ports. The switch nodes allow the network to have a more

complex structure than a linear network. For instance, the network may branch off into multiple paths at one switch node, while using another switch node to implement a loop. See Fig. 5.

Judd discloses two types of addressing schemes that can be used in such a network: Scheme A and Scheme B. These schemes are described below.

*Scheme A of Judd:*

In this addressing scheme, Judd discloses that each dual port node looks at the first byte in the address field of each received frame. If bits 7:4 ("Hi\_digit") in the first byte represents a hexadecimal digit value of 0h, the dual-port node accepts the frame and uses the remaining bits in the first byte (bits 3:0, referred to as "Lo\_digit") to determine a channel within the node. If Hi\_digit is not equal to 0h, the dual-port node decrements Hi\_digit in the address field and passes the frame through the non-receiving port. See col. 7, line 50 - col. 8, line 9.

In Scheme A, each switch node similarly examines the Hi\_digit in the address field when it receives the frame. If Hi\_digit is 0h, the switch node accepts the frame. If not, the switch node determines to which path (i.e., port) the frame should be forwarded based on the combination of Hi\_digit and

Lo\_digit. Before forwarding the frame to the determined port, the switch drops the most significant digit in the frame. The node subsequently receiving the frame examines the remaining digits in the address field (i.e., to determine whether or not to accept the frame, to which channel or port the frame should be forwarded, etc.). See col. 8, lines 10-61.

*Scheme B of Judd:*

In this scheme, Judd teaches that each dual-port node examines the next active digit ("Next\_digit") in the address field of a received frame. If this digit is 0h, the node accepts the frame and uses the remainder of the address field to determine the channel in the node. If Next\_digit is not 0h, the node decrements Next\_digit and forwards the frame to the non-receiving port. See col. 9, lines 4-43.

In Scheme B, Judd discloses that each switch node also looks at the Next\_digit. If it is 0h, the switch node discards it and looks at the next active digit in the address field (the new Next\_digit). If this digit is 0h, the switch node accepts the frame and uses the remainder of the address field to determine the channel. If the new Next\_digit is not 0h, the switch node uses the Next\_digit to determine to which port the frame is forwarded, and then deletes the new Next\_digit.

Thereafter, the frame is forwarded to the appropriate port, and the subsequent receiving node examines the remaining digits in the address field. See col. 9, lines 44-62.

Claims Not Anticipated by Judd

As amended, independent claims 1, 5, 14, and 18 recite incrementing the counter by a preselected step in value at each node until the counter reaches the initial value, thereby indicating that the destination node has been reached. It is respectfully submitted that Judd fails to disclose this feature.

In the rejection, the Examiner relies on col. 2, lines 3-18 and 32-41, and col. 7, lines 64-67 of Judd. These sections refer to Judd's teaching that the dual-port nodes decrement a portion of the message's address field (i.e., "Hi\_digit" in Scheme A, and "Next\_digit" in Scheme B) before forwarding the message. Furthermore, these sections disclose that strings of dual-port nodes are "effectively addressed by decrementing a 'hop count.'" See col. 2, lines 39-41.

Thus, even assuming for the sake of argument that the decremented part of the address field teaches a counter, Applicant respectfully submits that the Judd still fails to disclose incrementing a counter at each node until the counter reaches a particular value, as required by claims 1, 5, 14, and

18. Accordingly, it is respectfully submitted that Judd fails to anticipate these claims, or any of the claims that depend thereon.

However, with regard to Judd, the Examiner alleges that "it would have been obvious to instead of [sic] decrement the counter but to increment it" (see Office Action at page 8, paragraph 19). The Examiner further attempts to rely on official notice in support of this assertion. Applicant respectfully submits that the Examiner's proposed modification of Judd is impermissible for the reasons provided below.

Examiner's Reliance on Official Notice Improper

Initially, Applicant respectfully traverses the Examiner's taking of official notice as to claims 9, 12, 15-17, and 19-21.

Applicant respectfully submits that the Examiner's use of official notice is improper. As indicated in MPEP § 2144.03, "it is appropriate for an examiner to take official notice of **facts** not in the record or to rely on 'common knowledge' in the making of a rejection" (emphasis added). Thus, it is clear that the Examiner is entitled to rely on official notice only for the purposes of making factual assertions.

However, in the present case, the Examiner does not rely on official notice to make any clear factual assertions. Instead,

the Examiner relies on official notice to the broad conclusory statement that "it would have been obvious to" modify the Judd patent in various ways so as to teach the claimed elements. For instance, in rejecting claim 9, the Examiner states, "Office [sic] Notice is taken that it would have been obvious to perform the adjustment of counting method in vice versa" (Office Action at page 8, paragraph 19). The Examiner makes similar statements in the Office Action in regards to claim 12 (pages 8-9, paragraph 20), claims 15 and 19 (page 9, paragraph 21), claim 20 (pages 10-11, paragraph 24).

Thus, Applicant respectfully submits that the Examiner is merely using official notice to avoid providing any motivation to make the proposed modifications to Judd. It is respectfully submitted that the Examiner is not permitted to forgo the requirement to provide such motivation. This is clearly indicated in MPEP § 2143.01, which states that:

"[t]he mere fact that can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the **desirability** of the combination. *In re Mills*, 916 F.2d 680, USPQ2d 1430 (Fed. Cir. 1990)." (second emphasis added)

#### Claims Not Rendered Obvious by Judd

Furthermore, Applicant points out that § 2143.01 of the MPEP further states:

If [a] proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

Here, Applicant respectfully submits that the Examiner's proposed modification of Judd renders the Judd unsatisfactory for its intended purpose and, thus, is not sanctioned by the provisions of 35 U.S.C. § 103.

As discussed above, Judd deals with network topologies that require the use of switch nodes in addition to dual-port nodes. One of the purposes of Judd's invention is to allow a switch node to route a message to the appropriate output port, without manually setting switches or requiring each switch to compare the message's destination address to a list of addresses. Also, Judd intends to allow both the dual-port and switch nodes to determine whether to accept or forward the message without using a stored address. See col. 1, lines 48-67.

To achieve these goals, Judd discloses addressing schemes (Schemes A and B), in which each node (dual-port and switch) determines whether to accept the message by comparing a portion of the message's address component to a predetermined value, i.e., 0h. If the message is not accepted, each node modifies the message's address value in a particular way before forwarding the message to the next appropriate node.



For Judd's addressing schemes to work properly, when a dual-port node does not accept the message, it must **decrement** the first digit in the message's address field before forwarding the message. This is because each subsequent switch node applies certain rules to the first and second digits of the address field. According to Judd, these rules allow the switch node to determine whether or not to accept the message, and to which port to route the message if it is not accepted. Judd's switch-node rules are described in col. 8, lines 10-25 for Scheme A; col. 9, lines 44-59 for Scheme B.

Thus, Applicant respectfully submits that the Examiner's proposed modification of Judd would render the switch-node rules completely ineffective. In other words, if Judd's dual-port nodes were modified to increment the first digit of the address field, the rules applied in each switch node would not correctly determine whether to accept a received message, or route non-accepted messages to the appropriate output port.

Accordingly, it would not be obvious to modify Judd to increment a counter, as proposed by the Examiner, because this modification would render Judd's invention unsatisfactory for its intended purpose. Accordingly, Applicant respectfully submits that the Examiner has failed to provide a teaching or

suggestion of incrementing a counter at each node, as required by independent claims 1, 5, 14, and 18.

At least for the reasons set forth above, it is respectfully submitted that claims 1, 5, 14, and 18 are allowable at least for the reasons discussed above. Furthermore, Applicant submits that claims 2-4, 7, 9-13, 15-17, and 19-21 are allowable at least by virtue of their dependency on the above-mentioned independent claims.

Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw the rejection of claims 1-5, 7, 10, 11, 14, and 18 under 35 U.S.C. § 102(b). Applicant further requests the Examiner to reconsider and withdraw the rejection of claims 9, 12, 15-17, and 19-21 under 35 U.S.C. § 103(a).

#### **Drawings**

Formal drawings are being filed concurrently herewith to replace the informal drawings in the application. It is respectfully submitted that the filing of these formal drawings adds no new subject matter to the application. Also these formal drawings make no substantive changes to the matter in the original drawings.

**Conclusion**

Since the remaining patents cited by the Examiner have not been utilized to reject the claims, but to merely show the state of the art, no comment need be made with respect thereto.

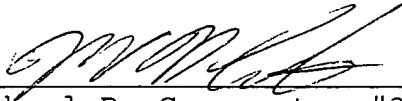
All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request the Examiner to reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.


Should the Examiner believe that any outstanding matters remain in the present application, the Examiner is respectfully requested to contact Jason W. Rhodes (Reg. No. 47,305), at the telephone number of (703) 205-8000, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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